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U.S. EXPORTS TO JAPAN: A REVIEW OF 1984 SALES

Summary

With all the headline-making talk in Washington about limited market opportunities in Japan for American exporters, it is easy to forget that Japan is this country's best overseas customer for manufactured products as well as agricultural and industrial raw materials. Capital goods, in fact, were the export pacesetters in 1984, expanding 10 percent to $5.6 billion on top of a year-earlier jump of 15.4 percent. Consumer goods also remained firmly entrenched in the plus column, with growth doubling to 5.8 percent and pushing sales to $1.5 billion. Moreover, industrial supplies, which had fallen by 4.8 percent in 1983, rebounded 4.6 percent to $9.1 billion, mainly because of bigger sales of the many manufactured products in this category. In addition, food and feed commodities, after going up 11.7 percent, rose 6.7 percent to $5.9 billion. On balance, total U.S. sales expanded 7.7 percent in 1984 to $23.6 billion, even though most components of Japanese domestic demand were performing below par and the dollar shot up against the yen in the second half.

Export Profiles

Industrial Supplies - With resurgent domestic demand backing up the country's booming export business, the recovery in Japanese manufacturing spread last year from capital goods and consumer products to steel, nonferrous metals, petrochemicals, paper and paperboard, textiles and most other basic industries. Paradoxically, this was not good news for American suppliers of many big-volume intermediate goods.

Take petrochemicals for example. The Japanese petrochemical industry got production costs under better control in 1984, thanks largely to declining prices for naphtha, its primary feedstock and fuel, and also because of the continuing closure of small, inefficient plants for the production of ethylene, the basic building block for petrochemical intermediates in Japan. These improvements blunted the competitive edge American exporters had previously wielded in commodity petrochemical intermediates -- whether derived from benzene, xylene and other aromatics (cyclics) like styrene monomer or, like ethylene dichloride and acrylonitrile, based on ethylene, propylene and other olefins (acyclics). At the same time, though, strengthening demand for nearly all downstream petrochemical products, including plastics, synthetic fibers, synthetic rubber, fertilizers and surface-active agents, boosted U.S. sales of a long list of specialized intermediates, such as phenol derivatives and polyhydric alcohols and their ester derivatives.

These gains helped return chemicals to the plus column. So did increased shipments in the catch-all category of industrial inorganic chemicals. In general, these also are commodity products where international competitiveness is determined by plant size and/or supply availabilities; in some cases, like soda ash and other chloralkalis, U.S. producers have an advantage over their Japanese competitors because of lower energy costs. What really made the difference between a so-so year for chemical exports in 1984 and a good year, however, was the rebound in sales of uranium and thorium compounds, which are used primarily as catalysts and reagents in medical research and diagnostic procedures. With shipments back to their 1982 level, total exports of chemicals went up 19.3 percent to $1.5 billion.

Lower-priced energy supplies plus raw material cost-containment efforts also got Japan's paper and paperboard industry back on track last year. But the cap on raw material costs was again achieved largely through the replacement of wood chips by recycled waste paper, which now provides roughly half of the raw material requirements of both paper and paperboard makers. By itself, this substitution meant no shipment growth for U.S. chip exporters. In addition, American producers of softwood chips lost some sales to Australian exporters of hardwood chips because of the continuing shift in Japanese production from kraft and other brown papers to white papers, particularly specialty grades. Market developments, however, were not entirely bleak for this country's exporters of paper base stocks. Pulp suppliers picked up business in the flat Japanese import market that normally would have gone to Canada when mills in British Columbia went on strike for several months. This windfall lifted sales of paper base stocks 8.5 percent to over $0.5 billion.

American coal exporters were not so fortunate. True, larger orders from all major domestic steel users except the civil engineering sector boosted Japanese steel production in 1984 for the first time in five years, but this rebound failed to reverse the slide in U.S. coking coal shipments. To start with, coal consumption did not increase in step with steel production, in large part because electric furnace operators provided one-fifth of the added output but also because of continuing technical improvements in the production process for both coke and pig iron. More importantly, Japanese steel mills again had a glut of coking coal under long-term contract from mines in Australia and

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Canada. With deliveries starting in 1984 from several new Canadian projects, the industry had little choice but to trim purchases from its swing supplier, the United States. American producers therefore ended up with just 22 percent of Japan's record volume of coking coal imports -- the same share supplied by Canadian companies, which shipped 50 percent more coal to steel mills in 1984, and half of Australia's share. And that was not the end of the bad news for U.S. coal exporters. Since Japanese electric utilities were also heavily overcommitted on long-term steam coal deliveries from Australia, they cut purchases from this country. The bottom line for the American coal industry was that exports to Japan fell 13.6 percent last year to under $0.9 billion.

U.S. exporters of logs and lumber found themselves in a similar bind. Japanese residential construction finally rallied in 1984, ending a five-year decline, but this did not translate into extra business for sawmills, either domestic or foreign. Aside from the fact that building starts were still running about a fifth below the level of the late 1970s, the long-term trend toward proportionately fewer wooden housing units and smaller average floor space remained at work. American log suppliers faced an additional sales constraint: Japanese wholesalers and sawmills entered 1984 with above-normal stocks of North American softwood logs. Inventories were worked down during the year by limiting purchases from U.S. producers. This adjustment, it turned out, was the least of the Pacific Northwest's export problems. American forest products companies also lost share in the contracting Japanese imported softwood log market to their British Columbian competitors, which had supplies that had to be moved regardless of the price. For U.S. log and lumber exporters, these developments added up to only one thing -- a 6.6 percent sales drop to $0.8 billion-plus.

The recovery of Japan's basic industries last year largely bypassed one key sector -- petroleum refining. Fuel oil production did inch up, largely because of robust sales of gasoline and kerosene, but the output of heavy (residual) fuel oil continued to drop, pulled down by declining demand from electric utilities and industrial customers. This reduction left the country short on some types of products, particularly bunker fuel used in coastal shipping. California refineries, which have profited from the recent problems of their Japanese counterparts, again stepped in, expanding shipments of heavy fuel oil. Although exports of light (distillate) fuel oil and petroleum coke were both off as a result of the lower energy requirements of industry and power companies, U.S. sales of petroleum products still increased 6.8 percent to just under $0.7 billion.

Food and Feed - Japan generally proved to be a better market for U.S. agricultural commodities in 1984 than analysts and traders expected. Corn was the main surprise. Forecasters had predicted that shipments would drop based on projections of less corn usage in Japanese production of commercially mixed livestock and poultry feed -- the end use for about three-fourths of corn deliveries -- and little pickup in sales of corn for manufacturing sweeteners, starch and other processed products. They were on target on the first score but off base on the second.

Although slightly weaker prices for eggs, milk, chicken, pork and beef plus a small increase in average retail feed prices put some pressure on livestock and poultry producers' profits in 1984, Japanese formula feed demand

remained on the upswing, extending a rally that had started two years before. This boosted feed production to a new high, but in a repeat of 1982, relative prices favored greater use of ingredients other than corn. Sorghum was the big winner this time around, not only providing the extra volume to expand output but also replacing the surplus rice that had been a major component of compound feed in both 1982 and 1983. Moreover, as part of a cost-cutting campaign dating back to mid-1983, feed millers continued to substitute less expensive sorghum for some higher-priced corn.

This switch pushed the corn content of Japanese feed steadily down during the year and seemed to eliminate any chance that U.S. exporters would duplicate their record-breaking 1983 performance. What changed these odds was South Africa's drought-triggered absence from the international grain market. With limited supplies available in other corn-exporting countries, the United States, which provides virtually all of Japan's feed corn requirements, took over the country's industrial corn trade -- a business normally shared with South Africa. This break turned 1984 into a banner year for corn exports after all, as sales jumped 13.5 percent to $2 billion.

While commodity analysts and traders missed the mark on corn shipments, they correctly anticipated a decline in soybean exports from 1983's record level. Japanese oilseed processors carried all-time-high soybean stocks into 1984, partly due to overbuying in the wake of the 1983 U.S. drought and also because of a slowdown in the crush that fall as higher U.S. soybean prices began to dampen demand for soybean meal in commercially prepared feed. Carryover meal inventories were also extremely high. Under normal conditions, an expansion in feed production like 1984's increase would have helped work down stocks of soybean meal -- the main protein meal ingredient in feed -- and encouraged stepped-up crushing, but this scenario did not pan out last year.

For most of 1984, relative protein meal prices favored greater use of fish meal at the expense of more soybean meal; rapeseed meal was also attractively priced until mid-year. Although soybean meal regained the price advantage from rapeseed meal in the year's second half, feed millers continued to cut soybean meal mixing in an effort to minimize costs. As a result of this adjustment, which dropped the soybean meal content of Japanese formula feed to its lowest level in ten years, only a small dent was made in the glut of soybean meal held by crushers. With consumption of food-grade soybeans flat, the oilseed processing industry's reduced demand for soybeans translated into smaller U.S. shipments. Sales were off just 3.1 percent to slightly under $1.2 billion, however, since export prices jumped again.

Capital Goods - Robust business spending on plant and equipment was the one bright spot in Japan's otherwise lackluster domestic economic performance during 1984. Centered in the electronics industry, where manufacturers of industrial and consumer products alike poured money into capacity expansion, as well as in the motor vehicles sector (modernization) and the chemicals field (diversification), the investment boom provided additional market opportunities for U.S. makers of high technology products. Measuring and testing equipment, medical apparatus, semiconductor production and assembly equipment, integrated circuits -- sales were up almost across the board.

The continuing rapid pace of factory and office automation in Japan made American producers of data processing equipment the biggest winners, boosting

their exports 27.2 percent to nearly $1.2 billion. About half of this gain represented increased sales of systems, which ranged all the way from personal computers up to supercomputers, and add-on peripherals. The other half reflected larger shipments of parts going to the Japanese manufacturing subsidiaries or affiliates of U.S. computer makers, particularly, it appeared, International Business Machines Corp.'s local unit, which manufactures most of the computer giant's line of large-capacity mainframes as well as some of its medium-capacity models.

The major exception to the picture of expanding sales of high technology products was commercial aircraft -- always a volatile export, but the 35.1 percent drop in deliveries to just over $0.5 billion was more a question of the type of plane purchased than the number bought. All together, Japanese airlines took delivery of ten passenger jet transports, only two fewer than in 1983. Japan Air Lines added two of Boeing Co.'s 747s to its already big fleet, including a 747-300-SUD for international routes and a slightly smaller 747 SR for domestic use. For its part, All Nippon Airways, Japan's major domestic carrier, put seven more 767s into service, bringing its fleet of Boeing's latest generation of widebody medium-range planes to 13. In addition, Nippon Cargo Airlines, a new carrier awaiting approval to start freight service between Japan and the United States, took delivery of its first 747-200F.

Consumer Goods - The gain in sales of consumer goods was rather surprising considering the fact that U.S. manufacturers had to overcome the twin obstacles of sluggish Japanese consumer spending and a strengthening dollar. What made the expansion even more remarkable was that pharmaceutical sales increased by a smaller margin than in 1983, advancing just 5.1 percent to a little less than $0.6 billion. To some extent, this slowdown was indicative of the general pause in Japan's pharmaceutical business as drug makers, foreign and domestic, adjusted to the government's new prescription reimbursement policies. It also reflected continuing weak demand for older-generation products, particularly antibiotics -- the mainstay of U.S. exports, and the growing competitiveness of Japanese companies in newer-generation drugs.

Export Prospects

Even more than last year, manufactured goods will have to carry exports to Japan in 1985 since sales of big-ticket raw materials -- coal, logs, corn and soybeans -- will be lucky to match 1984's tallies. Current forecasts of more balanced economic growth in Japan this year and some rise in the yen's value signal relatively good prospects for American-made capital goods, consumer products and other manufactures, including chemicals. How much exports of these products increase, though, could turn on Tokyo's ability to persuade Japanese businessmen and consumers to alter their buying practices.

For further information, contact Susan MacKnight.

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The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

U.S. Exports to Japan, by Commodity, 1983 and 1984

(in millions of dollars and indicated quantity units)

Commodity	Quantity 1983	Quantity 1984	Value 1983	Value 1984	Percent Change 1983/84	Japan's Share of U.S. Exports 1984
Total Exports			$21,894.3	$23,575.0	7.7%	10.8%
Industrial Supplies			8,733.6	9,139.2	4.6	14.8
Bituminous Coal	17,863,672 stn	16,324,191 stn	1,002.0	865.4	-13.6	21.2
Coking Coal	16,122,384 stn	15,498,931 stn	919.9	829.8	-9.8	27.8
Steam Coal	1,741,288 stn	825,260 stn	82.1	35.7	-56.5	3.2
Petroleum Products			639.4	683.1	6.8	15.9
Light Fuel Oils	4,936,624 bbl	3,175,817 bbl	158.8	102.6	-35.4	19.7
Heavy Fuel Oils	10,694,435 bbl	13,579,993 bbl	276.7	369.2	33.4	20.5
Lubricating Oils			25.4	25.8	1.6	4.5
Petroleum Coke (excl. calcined)	3,557,732 stn	3,056,909 stn	130.6	120.1	-8.0	27.1
Natural Gas	54,124,064 mcf	55,618,275 mcf	266.8	262.3	-1.7	99.7
Propane	3,158,108 bbl	0 bbl	68.4	0.0	-100.0	0.0
Nuclear Reactor Fuels			151.8	144.1	-5.1	34.8
Logs and Lumber	2,658,823 mbf	2,361,936 mbf	899.7	840.5	-6.6	41.2
Douglas-fir Logs	1,094,147 mbf	914,927 mbf	332.3	325.6	-2.0	60.3
Western Hemlock Logs	704,951 mbf	631,475 mbf	239.4	199.1	-16.8	58.9
Lumber	631,480 mbf	602,198 mbf	208.8	199.5	-4.5	24.3
Paper Base Stocks			479.0	519.9	8.5	24.9
Wood Chips	2,288,133 stn	2,191,675 stn	157.0	156.6	-0.3	95.5
Wood Pulp	716,996 stn	737,697 stn	292.2	327.2	12.0	20.9
Waste Paper	266,163 stn	308,615 stn	28.8	35.4	22.9	8.7
Paper and Paper Products			285.4	290.0	1.6	11.8
Newsprint	181,141 stn	182,620 stn	82.9	86.8	4.7	64.8
Kraft Linerboard	189,494 stn	164,727 stn	53.2	50.5	-5.1	8.0
Coated Container Base Stock	135,490 stn	130,004 stn	98.3	90.4	-8.0	45.4
Chemicals (excl. plastics, fertilizers and insecticides)			1,288.5	1,536.8	19.3	14.1
Cyclic Hydrocarbons			88.3	80.6	-8.7	11.3
Styrene	83,179 stn	84,558 stn	44.4	46.7	5.2	14.1
Para-xylene	18,293,678 gal	18,866,799 gal	32.1	32.0	-0.3	14.1
Cyclic Organic Intermediate Chemical Compounds			117.8	142.8	21.2	11.7
Alcohols, Phenols and Their Derivatives	37,384 stn	27,500 stn	37.6	40.9	8.8	30.7
Nitrogren Function Compounds and Their Derivatives	21,630 stn	23,579 stn	29.6	30.2	2.0	22.2
Acyclic Organic Chemical Compounds			336.8	340.4	1.1	14.7
Ethylene Dichloride	300,517 stn	247,659 stn	66.7	52.3	-21.6	64.6
Ethylene Glycol	88,326 stn	78,719 stn	28.7	28.6	-0.3	20.6
Acrylonitrile	103,903 stn	89,096 stn	50.8	42.5	-16.3	16.7
Uranium and Thorium Compounds	369 stn	561 stn	268.1	437.7	63.3	48.8
Sodium Compounds			43.8	49.2	12.3	8.7
Color Lakes and Toners, Dyes and Paints			30.1	31.4	4.3	6.6
Antiknock Compounds and Additives for Lubricating Oils			64.5	68.1	5.6	9.2
Compound Catalysts (excl. nickel)			30.8	25.3	-17.9	11.5
Plastic and Synthetic Resin Compounds			330.8	356.5	7.8	9.6
Polyamide Resins	11,346 stn	14,798 stn	21.5	25.3	17.7	37.1
Polyester Resins	10,015 stn	12,276 stn	21.2	24.6	16.0	23.5
Poly and Copolymerization Type Thermoplastic Resins	31,704 stn	26,546 stn	71.1	66.0	-7.2	27.3
Film, Strips and Sheets			46.7	45.7	-2.1	6.8
Synthetic Rubber			46.7	56.9	21.8	9.1

Commodity	Quantity 1983	Quantity 1984	Value 1983	Value 1984	Percent Change 1983/84	Japan's Share of U.S. Exports 1984
Fertilizers and Insecticides			$ 279.1	$ 297.7	6.7%	7.1%
Crude Phosphates	1,684,892 stn	1,404,789 stn	63.1	50.8	-19.5	13.0
Fertilizers			110.1	122.2	11.0	6.7
Diammonium Phosphate Fertilizers	489,961 stn	538,275 stn	75.2	92.2	22.6	7.7
Unmixed Pesticides			48.9	44.1	-9.8	5.5
Manufactured Pesticides			57.0	65.4	14.7	9.2
Still X-Ray Film	40,044,939 sft	55,385,712 sft	31.0	38.9	25.5	27.4
Photosensitive Papers			28.5	29.2	2.5	9.4
Steel Scrap	2,599,386 stn	2,680,038 stn	218.3	264.9	21.3	28.9
Nonferrous Ores and Scrap			308.8	363.8	17.8	24.1
Copper Ore	32,330 stn	62,004 stn	32.6	63.7	95.4	93.5
Copper Scrap	21,588 stn	47,779 stn	23.3	49.7	113.3	22.8
Aluminum Scrap	233,110 stn	188,051 stn	202.5	184.3	-9.0	66.8
Molybdenum Ore	2,265 stn	3,448 stn	17.7	26.0	46.9	10.7
Unwrought Copper	8,031 stn	78,567 stn	12.5	107.5	760.0	74.6
Aluminum Ingot	279,184 stn	154,011 stn	355.1	209.9	-40.9	52.9
Unwrought Magnesium	12,758 stn	12,042 stn	28.3	28.9	2.1	23.9
Silicon	1,283 stn	1,764 stn	13.2	29.7	125.0	33.6
Silver	4,436,696 toz	4,284,194 toz	51.6	35.5	-31.2	36.4
Platinum and Platinum Group Metals	169,779 toz	234,766 toz	54.3	67.0	23.4	44.2
Gold	95,897 toz	38,722 toz	39.5	10.9	-72.4	0.6
Iron and Steel (incl. ferroalloys)			41.5	63.1	52.0	4.7
Tube and Pipe Fittings			19.8	28.0	41.4	11.4
Unmanufactured Nonmetallic Minerals			92.4	100.4	8.7	13.3
Kaolin Clay	415,450 stn	468,450 stn	53.1	61.7	16.2	36.3
Manufactured Mineral Supplies			80.0	108.7	35.9	7.6
Glass (excl. automotive and mirror glass)			21.6	29.3	35.6	8.4
Industrial Textile Fibers, Yarns and Fabric			63.5	67.5	6.3	2.7
Synthetic Fibers and Manmade-Fiber Yarns			28.0	32.2	15.0	2.8
Raw Cotton	1,394,164 rba	1,588,117 rba	499.9	605.1	21.0	24.8
Whole Cattle Hides	6,388,331 pc	7,333,641 pc	224.1	305.0	36.1	28.6
Leaf Tobacco	57,084 stn	46,058 stn	338.5	286.0	-15.5	22.4
Food and Feed			5,554.7	5,929.2	6.7	18.8
Corn (excl. seed and popcorn)	513,647,090 bu	537,086,560 bu	1,753.3	1,990.2	13.5	28.5
Sorghum (excl. seed)	25,348,775 bu	87,897,756 bu	84.1	269.1	220.0	31.8
Soybeans (excl. seed)	167,198,266 bu	152,067,433 bu	1,209.4	1,171.7	-3.1	21.6
Animal Feeds			158.6	172.7	8.9	7.8
Dried Beet Pulp	402,155 stn	444,437 stn	51.4	58.2	13.2	90.3
Alfalfa Meal and Cubes			66.6	60.3	-9.5	88.3
Wheat	127,308,710 bu	124,086,660 bu	589.3	534.5	-9.3	8.3
Barley	13,923,571 bu	16,565,372 bu	37.4	46.7	24.9	17.9
Fruits and Vegetables			418.8	452.6	8.1	18.6
Lemons	132,459 stn	132,380 stn	74.2	80.4	8.4	86.3
Grapefruit	185,786 stn	159,517 stn	59.7	51.4	-13.9	56.1
Oranges and Tangerines	98,967 stn	96,203 stn	51.9	62.0	19.5	28.9
Almonds			43.5	48.3	11.0	15.3
Frozen Vegetables			61.7	59.5	-3.6	59.2
Frozen French Fried Potatoes	41,061 stn	47,393 stn	29.4	30.9	5.1	76.7
Meat and Meat Products			574.2	571.0	-0.6	47.3
Fresh and Frozen Beef	65,743 stn	85,578 stn	253.5	322.2	27.1	71.4
Fresh and Frozen Beef Offals	37,065 stn	38,072 stn	84.0	76.9	-8.5	33.4
Fresh and Frozen Pork	37,696 stn	20,845 stn	118.0	62.1	-47.4	64.1
Fresh and Frozen Poultry	72,947 stn	57,647 stn	91.5	74.6	-18.5	29.6

Commodity	Quantity 1983	Quantity 1984	Value 1983	Value 1984	Percent Change 1983/84	Japan's Share of U.S. Exports 1984
Fish and Fish Products			$ 505.9	$ 502.9	-0.6%	59.2%
Fresh and Frozen Whole Salmon	94,583 stn	84,910 stn	287.9	261.5	-9.2	76.7
Fresh and Frozen Whole Herring	41,700 stn	33,154 stn	52.7	42.9	-18.6	86.2
Fish Roe	12,461 stn	15,196 stn	83.2	81.4	-2.2	90.4
Frozen Snow Crab	6,074 stn	5,911 stn	30.7	24.3	-20.8	84.9
Capital Goods			5,116.4	5,626.6	10.0	6.1
Nonelectric Machinery			2,936.4	3,458.5	17.8	7.6
Data Processing Equipment			916.6	1,166.2	27.2	8.2
Computers			236.0	296.6	25.7	9.8
Peripheral Equipment and Parts			596.5	760.2	27.4	7.4
Disk and Tape Storage Units			71.6	85.3	19.1	6.6
Terminals			37.9	45.2	19.3	4.7
Parts			387.1	484.5	25.2	7.7
Magnetic Computer Disks and Tapes			23.9	28.9	20.9	10.0
Semiconductor Production and Assembly Equipment and Parts			203.3	351.6	72.9	30.1
Measuring, Testing and Controlling Instruments and Parts			485.8	539.1	11.0	11.2
Industrial Process-Type Instruments and Parts			37.4	56.1	50.0	7.9
Chemical Analysis Equipment and Parts			45.4	51.5	13.4	10.9
Physical Analysis Equipment and Parts			54.4	55.6	2.2	12.9
Equipment for Testing Electrical, Radio and Communications Circuits and Parts			174.7	191.6	9.7	15.2
Instruments for Measuring or Checking Electrical Quantities and Parts			41.6	42.2	1.4	17.3
Scientific, Professional and Medical Equipment			225.5	247.1	9.6	12.0
Electromedical and Electrotherapeutic Apparatus and Parts (excl. X-ray equipment)			97.6	110.6	13.3	13.4
Medical Equipment Based on X-Rays and Parts			32.5	32.3	-0.6	13.5
Other Medical, Dental and Surgical Instruments and Parts			80.2	86.4	7.7	11.1
Power Generating Equipment (excl. aircraft and automotive engines)			251.2	307.5	22.4	13.5
Auxiliary Plant for Steam and Other Vapor Generating Boilers			68.1	85.1	25.0	84.9
Gas Turbines and Parts for Mechanical Drives			87.1	123.0	41.2	20.4
Nuclear Reactors and Parts			26.7	11.7	-56.2	17.0
Nonfarm Tractors, Parts and Attachments			32.2	45.3	40.7	2.7
Excavating and Paving Machinery			36.9	29.2	-20.9	2.0
Parts and Accessories for Oil and Gas Field Drilling Equipment			84.7	63.5	-25.0	2.9
Machine Tools and Parts			50.2	56.1	11.8	7.8
Commercial and Industrial Heating and Cooling Equipment and Parts			42.4	46.3	9.2	5.7
Pumps and Compressors			54.1	45.8	-15.3	3.1
Filtering and Purifying Machinery and Parts			50.4	39.5	-21.6	7.9
Taps, Cocks, Valves and Similar Devices and Parts			34.9	35.4	1.4	5.3
Equipment for Service Industries			113.6	111.3	-2.0	5.6
Electric Machinery			713.2	874.9	22.7	5.9
Semiconductors			261.0	361.5	38.5	6.8
Integrated Circuits			200.4	253.7	26.6	18.2
Linear Integrated Circuits	35,366,316 ut	75,508,374 ut	44.9	81.8	82.2	29.7
Chips, Dice and Wafers			29.9	69.2	131.4	2.4

Commodity	Quantity 1983	Quantity 1984	Value 1983	Value 1984	Percent Change 1983/84	Japan's Share of U.S. Exports 1984
Radar Apparatus (excl. for planes and boats) and Parts			$ 70.0	$ 63.5	-9.3%	14.4%
Generators, Transformers and Accessories			73.3	92.3	25.9	5.5
Connectors			45.0	57.4	27.6	14.6
Terminals and Electrical Splicers			25.4	27.0	6.3	13.1
Transportation Equipment			1,466.7	1,293.2	-11.8	4.0
Civilian Aircraft			834.8	541.4	-35.1	13.1
Passenger, Cargo and Combination Jet Transports	12 ut	10 ut	708.0	461.1	-34.9	14.3
General Aviation Planes and Helicopters	43 ut	43 ut	36.8	19.3	-47.6	4.0
Used or Rebuilt Airplanes	5 ut	8 ut	41.2	42.8	5.9	14.6
Civilian Aircraft Engines, Parts and Accessories			361.0	437.5	21.2	7.8
Jet Turbines			33.1	56.0	69.2	5.5
Jet Engine Parts			90.7	158.6	74.9	10.1
Railway Equipment, Parts and Accessories			45.4	55.7	22.7	9.0
Parts for Rolling Stock			34.1	43.2	26.7	46.5
New Cars	2,322 ut	2,044 ut	31.2	29.5	-5.4	0.6
Automotive Parts, Engines and Bodies			144.5	180.2	24.7	1.4
Consumer Goods			1,394.4	1,475.5	5.8	11.1
Pharmaceuticals			543.8	571.8	5.1	20.6
Bulk Antibiotics			146.8	163.8	11.6	24.0
Packaged Vitamins			28.1	31.5	12.1	35.2
Blood and Blood Derivatives			138.9	146.3	5.3	44.7
Cigarettes	273,473,150 pk	315,258,900 pk	80.4	95.4	18.7	8.5
Electric Household Appliances			37.2	50.6	36.0	4.2
Stainless Steel Cooking and Kitchenware			67.5	77.1	14.2	85.0
Toys and Sporting Goods			117.2	90.6	-22.7	10.9
Golf Equipment			62.5	43.2	-30.9	42.6
Still Film in Cartridges and Rolls	51,572,726 ut	44,567,790 ut	72.7	64.0	-12.0	21.3
Nonwoven Fabrics of Manmade Fibers			23.1	33.6	45.5	23.6
Clothing			44.2	43.1	-2.5	5.3
Footwear			17.5	37.5	114.3	33.6
Gem Diamonds and Other Gem Stones			64.1	56.3	-12.2	13.5
Works of Art			24.1	34.3	42.3	11.7
Printed Material			54.8	66.0	20.4	4.7
Miscellaneous			1,095.3	1,404.5	28.2	7.5
Military-Type Goods			293.8	401.6	36.7	8.1
Other Domestic Exports			426.8	521.6	22.2	6.6
Military Aircraft Engine Parts			344.0	326.3	-5.1	12.4
Re-exports			374.7	481.3	28.4	8.3

Key to quantity abbreviations:

bbl = barrels
bu = bushels
gal = gallons
lb = pounds
mbf = thousand board feet
mcf = thousand cubic feet
pc = pieces
pk = packs
rba = running bales
sft = square feet
stn = short tons
toz = troy ounces
ut = units

Source: U.S. Department of Commerce, U.S. Exports: Schedule E Commodity by Country (FT 410), December 1983 and December 1984.